UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,697	11/29/2001	Gordon Kerr	PAT 2678- 2 US	2599

26123 7590 06/11/2010

BORDEN LADNER GERVAIS LLP
Anne Kinsman
WORLD EXCHANGE PLAZA
100 QUEEN STREET SUITE 1100
OTTAWA, ON K1P 1J9
CANADA

EXAMINER	
EL CHANTI, HUSSEIN A	
ART UNIT	**PAPER NUMBER**
2457	

NOTIFICATION DATE	DELIVERY MODE
06/11/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipinfo@blgcanada.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GORDON KERR, JOHN F. PILLAR,
and ALLEN W. LENGACHER

Appeal 2009-006350
Application 09/995,697
Technology Center 2400

Decided: June 9, 2010

Before JOHN A. JEFFERY, LEE E. BARRETT, and JAY P. LUCAS, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-30 and 32-39. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

STATEMENT OF THE CASE

Appellants' invention processes stream data within a node by providing (1) a "producer" of properly-ordered substreams of a data stream; (2) potential "consumers" of the data stream; and (3) a "stream fabric" that receives the substreams, and sends a portion of the data within the stream to a selected consumer. *See generally* Spec. 3-5; Fig. 2. Claim 1 is illustrative with the key disputed limitation emphasized:

1. An apparatus for processing data streams comprising:

at least one producer of properly ordered substreams of a data stream;

a plurality of potential consumers of a data stream; and

a *stream fabric*, coupled to the producer and the potential consumers, that operates to receive the substreams from the producer, store each substream within a stream queue associated with each data stream and select one of said plurality of potential consumers and output at least a portion of the data within the stream queue to the selected consumer.

The Examiner relies on the following as evidence of unpatentability:

Vahalia	US 5,933,603	Aug. 3, 1999

THE REJECTION

The Examiner rejected claims 1-30 and 32-39 under 35 U.S.C. § 102(e)[1] as anticipated by Vahalia. Ans. 3-12.[2]

---

[1] Although the Examiner rejected the claims under § 102(e) over Vahalia, this reference actually qualifies as prior art under § 102(b) since this patent issued on August 3, 1999—more than one year before Appellants' effective filing date (December 29, 2000). Nevertheless, we deem this error harmless as it does not affect our review of the merits of the anticipation rejection.

CONTENTIONS

Regarding claim 1, the Examiner finds that Vahalia discloses an apparatus for processing data streams including (1) at least one data stream "producer" which the Examiner equates to Vahalia's disk array 47; (2) "potential consumers" of a data stream which the Examiner equates to Vahalia's stream servers 91-94; and (3) a "stream fabric" which is said to correspond to a "controller server" in Vahalia.[3] Ans. 3, 13-14. According to the Examiner, this controller server not only has "all the properties of a fabric[,]" but it also selects a "potential consumer" (i.e., a stream server). Ans. 14.

Appellants argue that Vahalia does not teach a "stream fabric" as claimed since Vahalia's stream/controller server PCs use a bus architecture—not a "fabric" as the term is understood in the art. Br. 10-14.

Appellants also argue that Vahalia does not disclose a stream fabric operable to select (1) a stream queue consumer by reading a consumer attribute for the stream queue (claim 2), and (2) one of the potential consumers based upon a predetermined criteria (claim 3), where the predetermined criteria comprises (a) a round robin system (claim 4), and (b) determining a least-burdened consumer (claim 5). Br. 14-16.

Appellants also argue that Vahalia does not disclose that the stream fabric receives a control signal associated with the stream queue from the consumer of the stream queue (claims 6 and 11), where the control signal

---

[2] Throughout this opinion, we refer to the Appeal Brief filed February 22, 2007 and the Examiner's Answer mailed February 25, 2008.

[3] *But see* Ans. 14 (asserting that Vahalia's *controller server* "includes all the properties of a fabric," but equating the "*ICDA cache server*" to the recited "stream fabric") (emphases added).

comprises an indication of at least one consumer attribute for the stream queue (claim 7), and the consumer attribute comprises (1) the selected consumer (claim 8), and (2) the number of bytes of data within the stream queue that are to be output to the consumer (claim 9). Br. 16-18.

Regarding claim 12, Appellants argue that Vahalia does not disclose the control signal comprises an instruction to (1) forward at least a portion of the data within the stream queue to the consumer, and (2) subsequently delete the portion of the data within the stream queue. Br. 18-19.

Regarding claim 13, Appellants argue that Vahalia does not transfer at least a portion of the data within the stream queue to another stream queue within the fabric. Br. 19.

Regarding claim 14, Appellants argue that Vahalia does not disclose that the producer is an Input/Output (I/O) element arranged to be coupled to a packet switched network. Br. 19.

Regarding claims 18 and 26, Appellants argue that Vahalia does not disclose that the consumer is a content processing element that operates to (1) receive the data output from the stream queue; (2) process contents of the data received from the stream queue; and (3) transmit at least one control signal to the stream fabric responsive to processing the contents of the data. Br. 21, 23-24.

Regarding claim 25, Appellants argue that Vahalia does not disclose that the producer and one of the potential consumers are the same component. Br. 23.

Regarding claim 30, Appellants argue that Vahalia does not disclose a stream switch within a packet switched network, where the stream switch comprises (1) an interface arranged receive and process a flow of data

packets from the packet switched network; (2) a stream fabric; and (3) a content processing element that operates to (a) receive a copy of at least part of the data within the stream queue; (b) process contents of that received data; and (c) instruct the stream fabric to direct the data within the queue to a selected flow of packets within the packet switched network via the interface responsive to processing the contents of the data. Br. 24-25.

Regarding claim 33, Appellants argue that Vahalia does not (1) receive a flow of data packets with a segmented portion, and (2) terminate the layer 4 protocol within the received data packets. Br. 26.

Regarding claim 35, Appellants argue that Vahalia does not (1) process contents of at least part of the data within the stream queue; (2) determine which consumer to select based upon the contents of the data within the stream queue; and (3) output that data to the selected consumer. Br. 27.

Regarding claim 37, Appellants argue that Vahalia does not disclose decrypting the data received from the stream queue. Br. 27.

The issues before us, then, are as follows:

ISSUES

Under § 102, has the Examiner erred by finding that Vahalia discloses:

(1) a stream fabric as recited in claim 1?

(2) the stream fabric selects a stream queue consumer by reading a consumer attribute for the stream queue as recited in claim 2?

(3) the stream fabric selects one of the potential consumers based upon a predetermined criteria as recited in claim 3, where this predetermined criteria comprises (a) a round robin system as recited in claim 4, and (b) determining a least-burdened consumer as recited in claim 5?

(4) the stream fabric receives a control signal associated with the stream queue from the consumer of the stream queue as recited in claim 6, where the control signal comprises an indication of at least one consumer attribute for the stream queue as recited in claim 7, and where the consumer attribute comprises (a) the selected consumer as recited in claim 8, and (b) the number of bytes of data within the stream queue that are to be output to the consumer as recited in claim 9?

(5) the control signal comprises an indication of at least one attribute for associated with the producer of the stream queue as recited in claim 10?

(6) the control signal comprises an instruction to (a) forward at least a portion of the data within the stream queue to the consumer; (b) subsequently delete the portion of the data within the stream queue as recited in claim 12; and (c) transfer at least a portion of the data within the stream queue to another stream queue within the fabric as recited in claim 13?

(7) the producer is an I/O element arranged to be coupled to a packet switched network as recited in claim 14?

(8) the consumer is a content processing element that operates to (a) receive the data output from the stream queue; (b) process contents of the data received from the stream queue; and (c) transmit at least one control signal to the stream fabric responsive to processing the contents of the data as recited in claims 18 and 26?

(9) a stream switch within a packet switched network, where the stream switch comprises (1) an interface arranged receive and process a flow of data packets from the packet switched network; (2) a stream fabric; and (3) a content processing element that operates to (a) receive a copy of at least part of the data within the stream queue; (b) process contents of that received data; and (c) instruct the stream fabric to direct the data within the queue to a selected flow of packets within the packet switched network vie the interface responsive to processing the contents of the data as recited in claim 30?

(10) receive a flow of data packets with a segmented portion of the data stream, and terminate the layer 4 protocol within the received data packets as recited in claim 33?

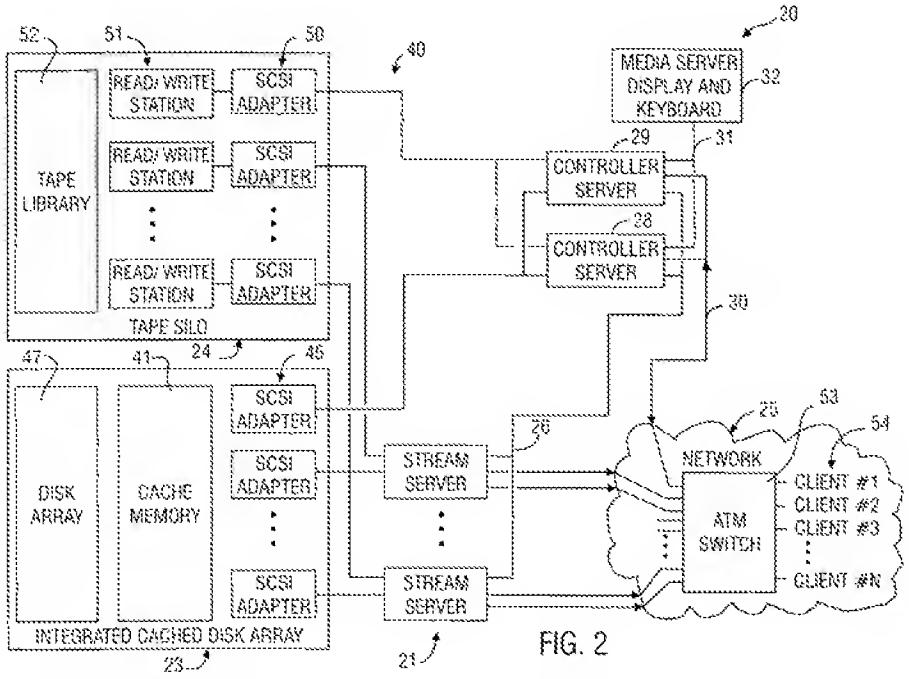
(11)(a) processing contents of at least part of the data within the stream queue; (b) determining which consumer to select based upon the contents of the data within the stream queue; and (c) outputting that data to the selected consumer as recited in claim 35?

(12) decrypting the data received from the stream queue as recited in claim 37?

FINDINGS OF FACT (FF)

1. Vahalia discloses a video file server 20 with an integrated cached disk array (ICDA) storage subsystem 23 and stream servers 21 linking the cached disk storage subsystem to a data network for transferring video data streams. Vahalia's video file server includes controller servers 28, 29 that assign a particular stream server to a network client 54 requesting

multimedia service. Vahalia, Abstract; col. 4, l. 59-65; col. 5, ll. 58-60; col. 6, ll. 24-26; col. 6, ll. 44-48; Figs. 1-2. A block diagram of Vahalia's video file server is shown in Figure 2 reproduced below:



Block Diagram of Vahalia's Video File Server in Figure 2

2. ICDA 23 includes a large-capacity semiconductor cache memory 41 and SCSI adapters 45 providing SCSI links to each of (1) stream servers 21, and (2) controller servers 28, 29. Vahalia, col. 6, ll. 48-52; Fig. 2.

3. ICDA 23 includes (1) disk array 47; (2) cache memory 41; and (2) microprocessor cards that are programmed to function as "disk directors" 44 and "channel directors" 43. Each channel director 43 (1) is interfaced to a particular stream server 21 via an associated SCSI adapter 45, and (2) accesses data in the cache memory responsive to a request from its associated stream server. Vahalia, col. 7, ll. 21-48; Fig. 3. A block diagram of Vahalia's ICDA 23 is shown in Figure 3 reproduced below:

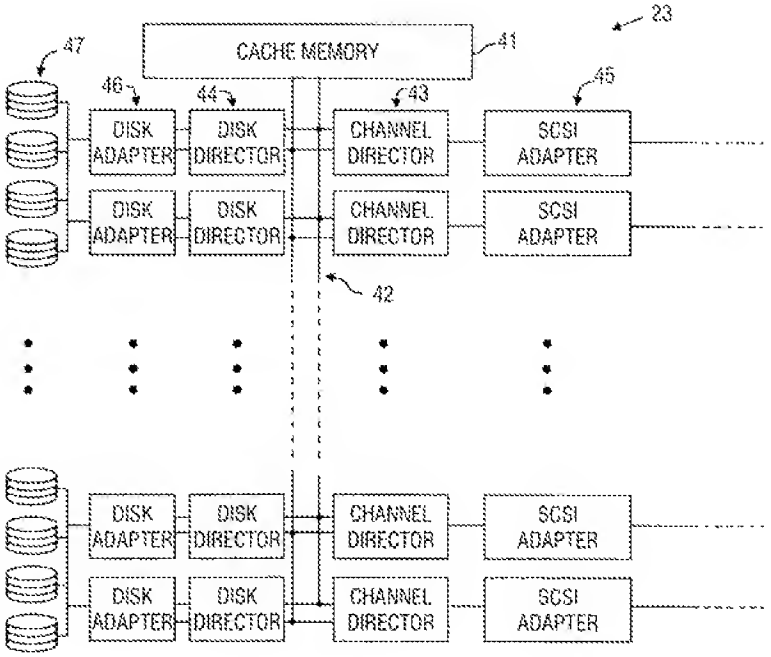


FIG. 3

Block Diagram of Vahalia's ICDA 23 in Figure 3

4. The active controller server applies an admission control policy to determine whether a service request can be satisfied and, if so, sends the stream servers appropriate control messages so that they can schedule operations to satisfy the request. If the request requires operation of a stream server, the controller server (1) selects a stream server to perform the operation, and (2) sends an associated command to the stream server. Vahalia, col. 8, ll. 24-49; Fig. 4.

5. Multiple video streams requested by multiple clients can be serviced from the ICDA's cache memory 41 without always fetching the video data from the disk array 47. To this end, data is (1) prefetched from

from disk array 47 to fill the ICDA cache 41, and then (2) fetched from the ICDA cache to fill the buffer 91 of a stream server associated with a first network client. Vahalia, col. 18, ll. 10-23; Fig. 9.

6. Prefetched data from disk array and stored in the ICDA cache for a first network client can also be fetched and sent to a second stream server's buffer 92 to service a second network client. Vahalia, col. 20, ll. 35-50; Fig. 13.

7. Figure 16 shows the allocation of RAM for four stream servers 91-94 for a popular movie. In this situation, the associated RAM windows and allocated and loaded with data before receiving client requests for a popular movie. Vahalia, col. 22, l. 60 – col. 25, l. 19; Figs. 16-17.

8. The admission control program checks whether the indexed stream server PC has sufficient resources to handle a client request and, if so, the client request is assigned to that PC. Generally, a stream server PC has a total buffer memory capacity limitation and various bandwidth limitations. Vahalia, col. 23, l. 55 – col. 24, l. 43; Fig. 17.

9. The admission control policy must ensure feasibility of the steady state operation of the video file server. A new stream can be admitted if (1) the rate at which the disk buffers are filled is greater or equal to the rate at which the network buffers are emptied; (2) sufficient buffer space exists for allocating disk and network buffers to all admitted streams; and (3) the disk service time for all streams does not exceed the minimum tolerable request latency. These conditions are mathematically represented by Equations (1), (3), and (4), respectively, in Columns 14 and 15. Vahalia, col. 14, l. 31 – col. 15, l. 26.

10. The maximum time taken by one round of filling up the disk buffers of all the streams is mathematically represented by Equation (5) in Column 15 of Vahalia, and is used to size the disk buffers. Each stream consumes its network buffer in time T which is the exact amount of time needed by the round-robin service to fill up the disk buffers for all the streams. If any stream reads more than its computed buffer size, then the round-robin time will take longer than T, causing some streams to starve. Vahalia, col. 15, ll. 34-64.

11. If data prefetched from the disk array is to be used only by a single network client, then it is desirable to minimize the amount of memory space allocated in the ICDA cache and in the stream server buffer 91 for storing the data. To this end, the fetch operation is scheduled no more in advance of data delivery to the network client than is necessary to guarantee that the fetched data will be available in the stream server buffer at the scheduled delivery time. Vahalia, col. 20, ll. 14-34.

12. The amount of RAM memory for storing a movie depends on the length of the movie and the bitrate at which the encoded movie has been delivered. This rate is typically a function of the method by which the video data are encoded (e.g., MPEG I or MPEG II). Vahalia, col. 23, ll. 19-29; Fig. 16.

ANALYSIS

Claims 1, 17, and 32

We begin by construing the key disputed limitation of claim 1 which calls for, in pertinent part, a "stream fabric." According to Appellants, a "fabric" refers to "the physical structure of a switch or network. Much like a

piece of cloth, physical/logical communications channels (threads) are interwoven from port-to-port (end-to-end). Ideally, data are transferred through this switch or network on a seamless basis." Br. 11 (citing Newton's Telecom Dictionary).

The Examiner restates this definition as "the physical structure and/or software used on a switch to connect one or more input ports to one or more output ports[,]" and maintains that a server that acts as a switch on a network inherently includes a fabric. Ans. 14.

We see no reason to quarrel with these interpretations. We do, however, note a significant ambiguity in the Examiner's position in light of these interpretations: on the one hand, the Examiner equates Vahalia's *controller server* to the recited stream fabric, but, on the other hand, the Examiner also equates the so-called "*ICDA cache server*" in Vahalia to the recited stream fabric.[4]

Further obscuring this ambiguity is the fact that Vahalia does not use the Examiner's term "ICDA cache server," but rather describes an ICDA *storage subsystem* 23 that includes (1) a disk array; (2) cache memory; and (3) SCSI adapters that link stream servers and controller servers. FF 1-2. It is therefore unclear what components of Vahalia's ICDA storage subsystem correspond to the Examiner's identified "ICDA cache server"

[4] *See* Ans. 14 ("[T]he *controller server* includes all the properties of a fabric and therefore examiner interprets the *ICDA cache server* as a 'stream fabric'."). *But see id.* ("Vahalia teaches that the stream server 'consumer' is selected by the *controller server* 'stream fabric'.") (emphases added). *See also* n.3 *supra*.

(which is said to correspond to the "stream fabric"), particularly since the Examiner also equates the disk array in the ICDA storage subsystem to recited substream "producer." Ans. 3.

Despite these ambiguities, we nevertheless presume that the Examiner intended to equate *both* the controller server *and* various components from the ICDA storage subsystem (e.g., the cache memory, SCSI adapters, and associated links (FF 1-2)) and their associated links as corresponding to the recited stream fabric. We reach this conclusion given (1) the interconnections of this network via the internal and external links with respect to the ICDA storage subsystem (*see* FF 2-3); and (2) the controller server's capability to select a stream server (FF 4).

We also find that this "stream fabric" would (1) receive substreams from a "producer" (i.e., the disk array 47), and (2) store each substream within a stream queue by prefetching the video data and storing it in the ICDA's cache memory 41. *See* FF 5-7. And this fabric, via the controller server and ICDA subsystem, selects and outputs the fetched data to a potential "consumer" of that data, namely a stream server as the Examiner indicates. Ans. 13-14; FF 4-7. We reach this conclusion emphasizing that nothing in the claim precludes interpreting "consumers" of a data stream as comprising intermediate devices that receive and process the stream, such as Vahalia's stream servers as the Examiner indicates.

In short, nothing in the claim requires the "consumers" of the data stream to be the *end users* of that stream, nor will we graft such a limitation onto the claim. And to the extent that Appellants' arguments are based on

such an interpretation,[5] those arguments are simply not germane to the Examiner's equating Vahalia's *stream servers*—not the end users—to the recited "consumers."

Appellants' argument that the bus architecture of Vahalia's stream/controller servers is not a fabric (Br. 13) is unavailing and, in any event, is not germane to the Examiner's position which is based on the controller servers, various components of the ICDA storage subsystem, and associated links as collectively constituting a "stream fabric" as noted above.

We are therefore not persuaded that the Examiner erred in rejecting claim 1. We will also sustain the Examiner's rejection of independent claim 32 which recites commensurate limitations, and claim 17 not separately argued.

Claims 2-5

We will also sustain the Examiner's rejection of claim 2 which recites that the stream fabric selects a stream queue consumer by reading a consumer attribute for the stream queue. We see no error in the Examiner's position (Ans. 15) that a stream server "consumer" is selected, at least in part, on its loading. As Vahalia indicates, this attribute would indicate the stream server's available resources to handle a client request—a key factor in selecting a particular stream server. *See* FF 7-8.

---

[5] *See, e.g.,* Br. 16 ("With respect to claim 1 the Examiner equates the *clients (the requester of a movie)* as the potential consumers."). *Accord id.* ("[A]ssuming the rejection is predicated on reading the *'consumer' as the requester of the movie*, the consumer of Vahalia most certainly does not send a control signal associated with the stream queue to a stream fabric . . . ." (emphases added).

We reach a similar conclusion regarding claim 3, for the stream server's available resources to handle a request would likewise constitute predetermined criteria for selection. *See id.* And since this resource-based criteria would also be based, at least in part, on the *round-robin* time needed to fill the disk buffers as the Examiner indicates (Ans. 15; FF 9-10), we find no error in the Examiner's position that the predetermined criteria comprises a "round robin system" as recited in claim 4, particularly in view of its scope and breadth.

Regarding claim 5, we are also not persuaded of error in the Examiner's position regarding the predetermined criteria including determining a least-burdened *stream server* "consumer" (Ans. 16; FF 4), particularly since Appellants' argument is premised on the notion that the "consumers" are the *clients* in Vahalia (Br. 5)—an interpretation inconsistent with that of the Examiner as noted previously.

We are therefore not persuaded that the Examiner erred in rejecting claims 2-5.

Claims 6-8, 10, and 11

We will also sustain the Examiner's rejection of representative claim 6 which recites that the stream fabric receives a control signal associated with the stream queue from the consumer of the stream queue. Here again, Appellants' arguments (Br. 6) are based on an interpretation of "consumer" (the clients in Vahalia) that is inconsistent with the Examiner's interpretation of "consumer" (Vahalia's stream servers) noted above.

Based on that interpretation, we find the claim fully met since Vahalia's *stream server* "consumer" sends a control signal (i.e., a request) to at least part of the "stream fabric" (i.e., the ICDA and its associated internal and external links) to access data in the cache memory responsive to this control signal (i.e., request). *See* FF 3.

We are therefore not persuaded that the Examiner erred in rejecting claim 6, and claim 11 not separately argued.

We likewise are not persuaded of error in the Examiner's rejection of claims 7 and 8, for the control signal sent from the selected stream server "consumer" would comprise at least an indication of an associated consumer attribute for the stream queue, namely the stream server's ability to handle the data sent to it from the ICDA based on its available resources as noted previously, but also the fact that the consumer (stream server) was selected. *See* FF 3-10. That selecting a stream server is a necessary predicate to sending the control signal from that selected stream server (*see* FF 3) only bolsters this conclusion.

Nor are we persuaded of error in the Examiner's rejection of claim 10 since the control signal noted above would also at least be associated with the "producer" of the stream queue, namely the ICDA and its associated disk array. *See* FF 1-8.

We are therefore not persuaded that the Examiner erred in rejecting claims 6-8, 10, and 11.

Claim 9

We will not, however, sustain the Examiner's rejection of claim 9 which calls for the consumer attribute to comprise the number of bytes of data within the stream queue that are to be output to the consumer. Even assuming that the memory available is detected for allocation to the stream servers corresponds to a "consumer attribute" as the Examiner indicates (Ans. 16), that hardly means that the *control signal* itself would comprise such an indication. While we agree that the control signal (request) sent by Vahalia's *stream server* "consumer" to the ICDA ("stream fabric") (*see* FF 3) comprises an indication of a consumer attribute as noted above, we fail to see how this attribute further comprises the number of bytes of data within the stream queue that are to be output to the consumer as claimed.

We are therefore persuaded that the Examiner erred in rejecting claim 9.

Claim 12

We reach a similar conclusion regarding claim 12 which requires that the control signal comprises an instruction to (1) forward at least a portion of the data within the stream queue to the consumer, and (2) subsequently delete the portion of the data within the stream queue. While we can see Vahalia's stream server control signal (request) as effectively constituting an instruction to forward data to the stream server ("consumer") (FF 3-6), we fail to see how this signal also necessarily includes an instruction to subsequently delete the portion of data within the stream queue as claimed.

The Examiner's reliance on Vahalia in this regard (Ans. 17) is unavailing, for Vahalia merely indicates the desirability of scheduling fetch operations no more in advance of data delivery to the network client than is necessary to guarantee that the fetched data will be available in the stream server buffer at the scheduled delivery time. FF 11. This strategic scheduling hardly means that there would *necessarily* be an instruction as part of the stream server's control signal to delete data that would be associated with a new request or otherwise. As Appellants indicate (Br. 18-19), Vahalia may actually keep that portion of data to later service other customers—a feature that is at least suggested by Vahalia by pre-loading stream servers with data for popular movies. *See* FF 7.

We are therefore persuaded that the Examiner erred in rejecting claim 12.

Claim 13

We will, however, sustain the Examiner's rejection of claim 13. Apart from merely referring to the arguments for claim 6, Appellants do not particularly point out error in the Examiner's findings (Ans. 17; FF 6) regarding Vahalia's multiple-segment transfer to different queues as it pertains to the limitations of claim 13. *See* Br. 19.

We are therefore not persuaded that the Examiner erred in rejecting claim 13.

Claim 14

We will not, however, sustain the Examiner's rejection of claim 14. Although the Examiner maps Vahalia's disk array to the recited "producer" (Ans. 13) as noted above, the Examiner simply does not explain how or why this disk array constitutes an I/O element, let alone that it is arranged to be coupled to a packet switched network as claimed. Not only is this explanation lacking on the record before us (let alone the requisite evidence to support such an explanation), the Examiner failed to respond at all to Appellants' arguments regarding claim 14. *See* Ans. 12-19.

In any event, to the extent that Vahalia's disk array could somehow constitute an I/O element that can be coupled to a packet switched network is a factual finding that has simply not been made on this record. Nor will we engage in such an inquiry in the first instance on appeal.

We are therefore persuaded that the Examiner erred in rejecting claim 14 and dependent claims 15 and 16 for similar reasons.

Claims 18-24 and 26-29

We will also not sustain the Examiner's rejection of claim 18 which recites that the consumer is a content processing element that operates to (1) receive the data output from the stream queue; (2) process contents of the data received from the stream queue; and (3) transmit at least one control signal to the stream fabric responsive to processing the contents of the data.

Apart from merely reiterating the claim language in the rejection (Ans. 6), the Examiner simply does not explain how or why the stream servers have this content processing functionality, particularly step (3) above which requires transmitting the *control signal* to the fabric *responsive to*

processing the content of the data received from the stream queue. Nor can we find any explanation or analysis in this regard in the Response to Arguments section of the Answer. *See generally* Ans. 12-18.

In any event, as noted previously, Vahalia's control signal is a *request* that is sent from the stream server to the ICDA to retrieve content from the cache memory. *See* FF 3-6. Since the stream server sends the control signal *before* it receives content from the stream queue, the control signal therefore cannot be sent *responsive to* processing that content.

We are therefore persuaded that the Examiner erred in rejecting claim 18 and dependent claims 19-24 for similar reasons. We likewise reverse the Examiner's rejection of independent claim 26 which recites commensurate limitations, and dependent claims 27-29 for similar reasons.

Since this issue is dispositive regarding our reversal of the rejection of these claims, we need not address Appellants' other arguments pertaining to claims 19-24 and 26-29 (Br. 21-24, 27).[6]

Claim 25

We will also not sustain the Examiner's rejection of claim 25 which recites that the producer and one of the potential consumers are the same component. Since the Examiner has mapped different elements in Vahalia

[6] We do note, however, that we find the Examiner's mapping of an "SAR engine" to a producer regarding claim 26 (Ans. 8) problematic since, as Appellants indicate (Br. 24), Vahalia is silent as to such an element. Nor does the Examiner respond to Appellants' arguments regarding claim 26 in the Response to Arguments section of the Answer, let alone explain why the Examiner's mapping of the "producer" in Vahalia changed from the disk array 47 in the ICDA cache to an undisclosed "SAR engine." *Compare* Ans. 13 *with* Ans. 8.

to the recited "producer" and "consumers," namely the disk array[7] and stream servers respectively (Ans. 13), they cannot be the same components. To the extent that the Examiner relies on some other components in Vahalia as meeting this limitation, such an interpretation has not been explained on this record, nor will we engage in such an inquiry here in the first instance on appeal.

We are therefore persuaded that the Examiner erred in rejecting claim 25.

Claim 30

We will also not sustain the Examiner's rejection of claim 30. Although the Examiner's rejection is not a model of clarity on this point (*see* Ans. 9), the Examiner apparently maps Vahalia's stream server as corresponding to the recited stream switch.

Nevertheless, the Examiner's rejection is problematic for several reasons. First, the Examiner has not explained how or why Vahalia's network is necessarily a *packet switched network*, let alone that the stream server has an interface arranged to receive and process a flow of data packets from such a packet switched network as claimed.

Second, the Examiner fails to explain why Vahalia's stream server constitutes a content processing element that operates to (1) receive *a copy* of at least part of the data within the stream queue; (2) process contents of that received data; and (3) instruct the stream fabric to direct the data within the queue to *a selected flow of packets* within the packet switched network

[7] *But see* Ans 8. (mapping an undisclosed "SAR engine" to the producer in connection with claim 26). *See* n.6 *supra*.

vie the interface *responsive to* processing the contents of the data as claimed. Not only has the Examiner not shown how Vahalia's stream servers receives a *copy* of the data within the stream queue—a limitation which requires that the data is duplicated—the Examiner has also not shown how Vahalia's stream server *instructs the stream fabric* to direct the data within the queue to a selected flow of packets *responsive to* processing the contents of the received data.

We are therefore persuaded that the Examiner erred in rejecting claim 30.

Claims 33 and 34

We will also not sustain the Examiner's rejection of claim 33 which calls for (1) receiving a flow of data packets with a segmented portion, and (2) terminating the layer 4 protocol within the received data packets.

First, as noted above, the Examiner has not shown that Vahalia's production of ordered substreams necessarily comprises receiving a flow of data packets, let alone that those packets contain at least one segmented portion of the data stream as claimed. And even if Vahalia's video file server did receive these data packets (a finding that has not been made on this record in any event), the Examiner has not shown that Vahalia necessarily terminates a layer 4 protocol within those packets as claimed.

Even assuming, without deciding, that Vahalia's movie transmission is frame-based, and is "received at network layer 3 or 4" as the Examiner asserts (Ans. 18), that hardly means that Vahalia would necessarily use a layer 4 protocol as claimed, let alone terminate such a protocol. That the Examiner's assertion itself indicates alternative protocols (i.e., layer 3 *or* 4)

(*id.*) only bolsters this conclusion. In any event, the Examiner's position is premised on what is purportedly "well known in the art" (*id.*): assertions that are not only unsupported by evidence on this record, but also germane to obviousness determinations—not anticipation.

We are therefore persuaded that the Examiner erred in rejecting claim 33 and dependent claim 34 for similar reasons. Since this issue is dispositive regarding our reversal of the rejection of these claims, we need not address Appellants' other arguments pertaining to claim 34 (Br. 26).

Claim 35, 36, 38, and 39

We will, however, sustain the Examiner's rejection of claim 35 which recites (1) processing contents of at least part of the data within the stream queue; (2) determining which consumer to select *based upon* the contents of the data within the stream queue; and (3) outputting that data to the selected consumer.

Like claim 18, claim 35 recites a content processing function. But unlike claim 18, claim 35 does not require transmitting a control signal to the stream fabric responsive to processing the data content, but rather merely recites determining which consumer to select *based upon* the contents of the data within the stream queue, and outputting that data to the selected consumer. Notably, the claim says nothing about what element actually processes the content: rather, the claim merely recites that the content is processed to determine the consumer.

This broad language does not preclude Vahalia's video file server functionality in which the controller server selects a particular stream server to retrieve the content from the ICDA and deliver it to a particular client

upon request. *See* FF 1-10. Simply put, the content of the data in the stream queue (i.e., data is stored in and retrieved from the ICDA) must be processed in Vahalia's video file server to determine whether it is appropriate to satisfy a client request for that content (e.g., a particular movie). *See id.* And a particular stream server is selected based, at least in part, on this data content so that the data can ultimately be delivered to the client who requested that particular content via the selected stream server. *See id.*

We are therefore not persuaded that the Examiner erred in rejecting representative claim 35, and claims 36 and 38 which fall with claim 35. We reach a similar conclusion regarding claim 39 which recites commensurate limitations.

Claim 37

We will not, however, sustain the Examiner's rejection of claim 37 which recites (1) decrypting the data received from the stream queue, and (2) storing the decrypted data within a second stream queue. Although Vahalia encodes video data for transmission (e.g., via MPEG encoding schemes) as the Examiner indicates (Ans. 17; FF 12), Vahalia is silent regarding whether it is decoded. Apparently recognizing this fact, the Examiner nonetheless asserts that this encoded data would inherently be *decoded* before display. Ans. 17. Although we find this assertion dubious at best given the lack of supporting evidence in this regard, the Examiner's rejection falls short for another reason. That is, even assuming that Vahalia inherently decodes the data stream before display, that hardly means that the data is *decrypted.*

Decryption "restor[es] encrypted data to its original form[,]" and encryption is "encod[es] data to prevent unauthorized access, especially during transmission[,]" and is "usually based on one or more keys, or codes, that are essential for decoding, or returning the data to readable form."[8]

Simply put, decoding and decryption are not the same. While decryption may be a *type* of decoding, not all decoding is decryption: a technique that restores data to a readable form from a previously-encrypted state that prevents unauthorized access during transmission. Therefore, even assuming, without deciding, that Vahalia necessarily *decodes* the encoded movies before displaying them (a finding that has not been made on this record in any event), the movies are not necessarily *decrypted*.

Nevertheless, even if we were to accept the Examiner's strained interpretation that Vahalia inherently "decrypts" the movie data (Ans. 17), the Examiner also fails to show that such "decrypted" data would be stored in a *second* stream queue as claimed. The Examiner has pointed to nothing in Vahalia that corresponds to such a separate and distinct stream queue that would store decrypted data as claimed.

We are therefore persuaded that the Examiner erred in rejecting claim 37.

CONCLUSION

Under § 102, the Examiner did not err in rejecting claims 1-8, 10, 11, 13, 17-20, 24, 32, 35, 36, 38, and 39, but erred in rejecting claims 9, 12, 14-16, 21-23, 25-30, 33, 34, and 37.

---

[8] *Microsoft Computer Dictionary*, 5th ed., 2002.

ORDER

The Examiner's decision rejecting claims 1-30 and 32-39 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

pgc

BORDEN LADNER GERVAIS LLP
Anne Kinsman
WORLD EXCHANGE PLAZA
100 QUEEN STREET SUITE 1100
OTTAWA ON K1P 1J9 CA CANADA